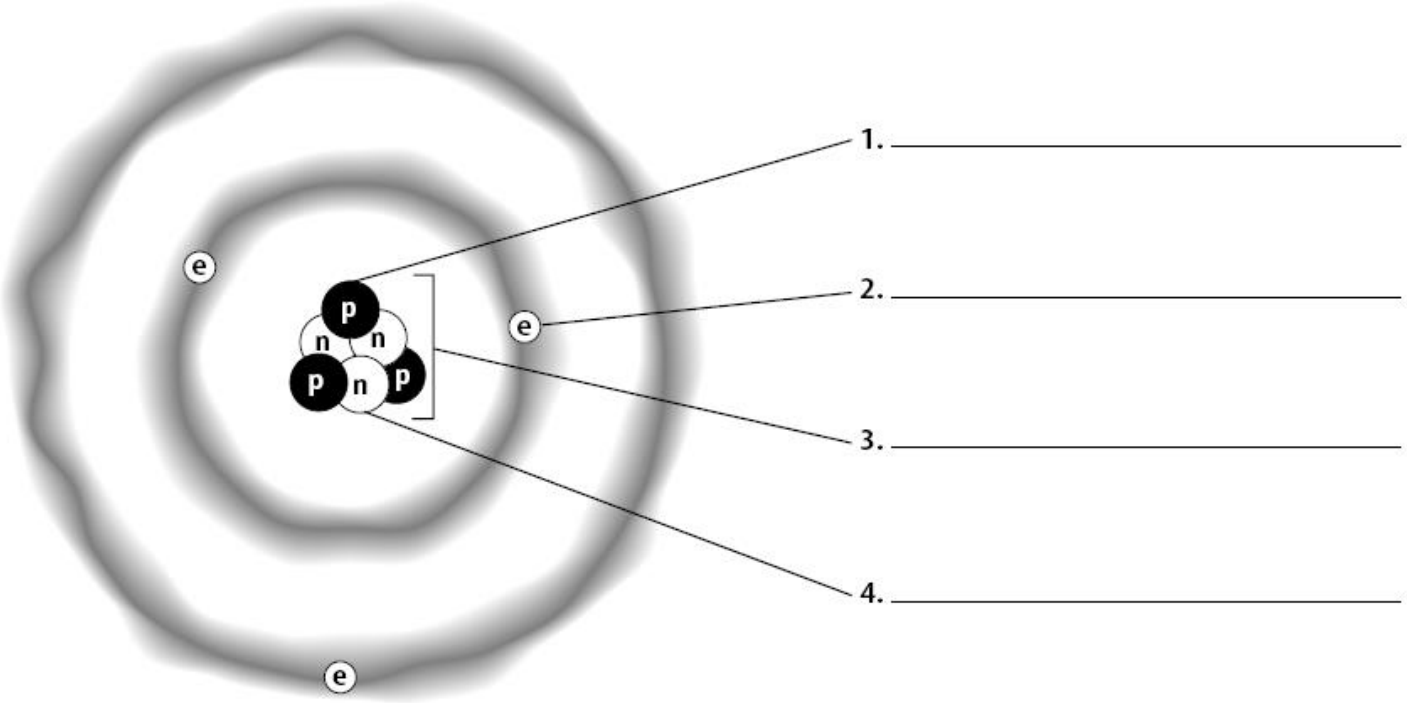
Name _____ Period _____

# Atoms

**Directions:** Study the following diagram. Then label each part using the correct terms from the list.

nucleus proton electron neutron




**Directions:** Circle the term that correctly completes each sentence.

5. The number of protons in an atom determines its (**atomic number / nucleus**).

6. An element's (**atomic number / mass number**) is the number of neutrons plus the number of protons.

7. A(n) (**compound / element**) is matter that is made up of only one kind of atom.

8. The (**element symbol / element name**) of sodium is Na.

9. Oxygen gas ($O_2$) is an example of a(n) (**molecule / element**).

10. Electrons are located (**inside / outside**) the nucleus of an atom.

11. A(n) (**compound / element**) is a substance made up of more than one element.

12. An element can be identified by the number of (**neutrons / protons**) in the nucleus.

Name _____ Date _____ Period _____

# Compounds vs. Mixtures

Write *true* if the statement is true. If the statement is false, change the underlined term to make the statement true. Write your answers in the spaces provided.

_____ **1.** The substances in a mixture can be separated by chemical means.

_____ **2.** A salad is an example of a compound.

_____ **3.** The substances in a mixture keep their own properties.

_____ **4.** Coffee is an example of a heterogeneous mixture.

_____ **5.** The substances in a mixture can be present in any amount.

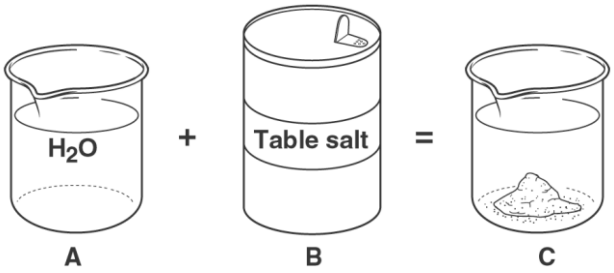
_____ **6.** Two or more substances that have been physically combined make up a mixture.

_____ **7.** The substances in a compound can be separated by physical means.

_____ **8.** The parts of a mixture are chemically combined.

### Skill Challenge

Study the diagram below. Use the information in the diagram to complete the statements that follow.




**1.** Part _____ of the diagram shows a mixture.

**2.** A compound is shown in Parts _____ of the diagram.

**3.** Molecules of the substance shown in Part A of the diagram _____ exactly alike.

**4.** Molecules of the substance shown in Part B _____ exactly alike.

**5.** All of the molecules shown in Part C _____ exactly alike.

**6.** The different molecules in Part _____ of the diagram can be separated by physical means.

**7.** Part _____ of the diagram shows the solute.

**8.** A solution is shown in Part _____ of the diagram.

**9.** Part _____ of the diagram shows the solvent.